WHAT IS CLAIMED IS:

1. A method for identifying an antineoplastic agent, comprising:

(a) contacting a test compound with a cell that expresses one or more amplicons of Table 2 having an amplification ratio of at least 2.0; and

(b) determining a change in said amplification ratio due to said contacting;

wherein a change in said amplification ratio due to said contacting indicates that said test compound has gene modulating activity

thereby identifying said test compound as a gene modulating agent.

2. The method of claim 1 wherein said change in expression is a decrease in expression.

3. The method of claim 2 wherein said decrease in expression is a decrease in copy number of the gene.

4. The method of claim 1 wherein said cell was genetically engineered to express said amplicon.

5. A method for identifying an antineoplastic agent, comprising:

(a) contacting a test compound with a cell that expresses at least one gene corresponding to a polynucleotide comprising a nucleotide sequence of SEQ ID NO: 1 - 3049 and under conditions promoting expression of said gene; and

(b) determining a change in expression of said gene as a result of said contacting

wherein a change in expression indicates gene modulation thereby identifying said test compound as a gene modulating agent.

6. The method of claim 5 wherein said change in expression is a decrease in expression.

7. The method of claim 5 wherein said decrease in expression is a decrease in copy number of the gene.

8. The method of claim 5 wherein said gene comprises a nucleotide sequence of one of SEQ ID NO: 1 – 3049.

9. The method of claim 5 wherein said cell was genetically engineered to express said gene.

10. A method for detecting the cancerous status of a cell, comprising detecting elevated expression in said cell of at least one gene corresponding to a polynucleotide comprising a nucleotide sequence of SEQ ID NO: 1 – 3049 whereby such elevated expression is indicative of cancerous status of the cell.

11. The method of claim 10 wherein said elevated expression is an elevated copy number of the gene.

12. A method for identifying a compound as an anti-neoplastic agent, comprising:

(a) contacting a test compound with a polypeptide encoded by a gene selected from SEQ ID NO: 1 – 3049,

(b) determining a change in a biological activity of said polypeptide due to said contacting,

wherein a change in activity indicates anti-neoplastic activity and thereby identifies such test compound as an agent having antineoplastic activity.

13. The method of claim 12 wherein said change in biological activity is a decrease in biological activity.

14. The method of claim 12 wherein said biological activity is an enzyme activity.

15. The method of claim 14 wherein said enzyme is selected from kinase, protease, peptidase, phosphodiesterase, phosphatase, dehydrogenase, reductase, carboxylase. transferase, deacetylase and polymerase.

16. The method of claim 15 wherein said kinase is a protein kinase.

17. The method of claim 15 wherein said kinase is a serine or threonine kinase.

18. The method of claim 15 wherein said kinase is a receptor tyrosine protein kinase.

19. The method of claim 15 wherein said protease is a serine protease, cysteine protease or aspartic acid protease.

20. The method of claim 15 wherein said transferase is a methyltransferase.

21. The method of claim 20 wherein said methyl transferase is a cytidine methyltransferase or an adenine methyltransferase.

22. The method of claim 15 wherein said deacetylase is a histone deacetylase.

23. The method of claim 11 wherein said carboxylase is a γ-carboxylase.

24. The method of claim 15 wherein said peptidase is a zinc peptidase.

25. The method of claim 15 wherein said polymerase is a DNA polymerase.

26. The method of claim 15 wherein said polymerase is a RNA polymerase.

27. The method of claim 12 wherein said biological activity is a membrane transport activity.

28. The method of claim 12 wherein said polypeptide is a cation channel protein, an anion channel protein, a gated-ion channel protein or an ABC transporter protein.

29. The method of claim 12 wherein said polypeptide is an integrin.

30. The method of claim 12 wherein said polypeptide is a Cytochrome P450 enzyme.

31. The method of claim 12 wherein said polypeptide is a nuclear hormone receptor.

32. The method of claim 12 wherein said biological activity is a receptor activity.

33. The method of claim 12 wherein said receptor is a G-protein-coupled receptor.

34. The method of claim 12 wherein said polypeptide is contained in a cell.

35. A method for identifying an anti-neoplastic agent comprising contacting a cancerous cell with a compound found to have anti-neoplastic

activity in the method of claim 12 under conditions promoting the growth of said cell and detecting a change in the activity of said cancerous cell.

36. The method of claim 35 wherein said change in activity is a decrease in the rate of replication of said cancerous cell.

37. The method of claim 35 wherein said change in activity is a decrease in the total number of progeny cells that can be produced by said cancerous cell.

38. The method of claim 35 wherein said change in activity is a decrease in the number of times said cancerous cell can replicate.

39. The method of claim 35 wherein said change in activity is the death of said cancerous cell.

40. A method for treating cancer comprising contacting a cancerous cell with an agent first identified as having gene modulating activity using the method of claim 1, 5, or 12 and in an amount effective to cause a reduction in cancerous activity of said cell.

41. The method of claim 40 wherein said cancerous cell is contacted *in vivo.*

42. The method of claim 40 wherein said reduction in cancerous activity is a decrease in the rate of proliferation of said cancerous cell.

43. The method of claim 40 wherein said reduction in cancerous activity is the death of said cancerous cell.

44. The method of claim 40 wherein said cancer is a cancer of breast, colon, lung or prostate tissues.

45. A method for treating cancer comprising contacting a cancerous cell with an agent having affinity for an expression product of a gene corresponding to a polynucleotide comprising a nucleotide sequence of SEQ ID NO: 1 – 3049 and in an amount effective to cause a reduction in cancerous activity of said cell.

46. The method of claim 45 wherein said expression product is a polypeptide.

47. The method of claim 45 wherein said agent is an antibody.

48. A method for monitoring the progress of cancer therapy in a patient comprising monitoring in a patient undergoing cancer therapy the expression of a gene corresponding to a polypeptide having a sequence selected from SEQ ID NO: 1 – 3049.

49. The method of claim 48 wherein said gene comprises a sequence of SEQ ID NO: 1 – 3049.

50. The method of claim 48 wherein said cancer therapy is chemotherapy.

51. The method of claim 48 wherein said cancer is a cancer of breast, colon, lung or prostate tissues.

52. A method for determining the likelihood of success of cancer therapy in a patient, comprising monitoring in a patient undergoing cancer therapy the expression of a gene corresponding to a polynucleotide having a sequence of one of SEQ ID NO: 1 – 3049 wherein a decrease in said expression prior to completion of said cancer therapy is indicative of a likelihood of success of said cancer therapy.

53. The method of claim 52 wherein said gene comprises a sequence of SEQ ID NO: 1-3049.

54. The method of claim 52 wherein said cancer therapy is chemotherapy.

55. The method of claim 52 wherein said cancer is a cancer of breast, colon, lung or prostate tissues.

56. A method for producing test data with respect to the anti-neoplastic activity of a compound comprising:

(a) identifying a test compound as having anti-neoplastic activity using a method of claim 12;

(b) producing test data with respect to the anti-neoplastic activity of said test compound sufficient to identify the chemical structure of said test compound.

57. A method for determining the progress of a treatment for cancer in a patient afflicted therewith, following commencement of a cancer treatment on said patient, comprising:

(a) determining in said patient a change in expression of one or more genes corresponding to a polynucleotide comprising a nucleotide sequence of SEQ ID NO: 1 – 3049; and

(b) determining a change in expression of said gene compared to expression of said one or more determined genes prior to commencement of said cancer treatment;

wherein said change in expression indicates progress of said treatment thereby determining the progress of said treatment.

58. The method of claim 57 wherein said change in expression is a decrease in expression and said decrease indicates success of said treatment.

59. A method for determining the progress of a treatment for cancer in a patient afflicted therewith, following commencement of a cancer treatment on said patient, comprising:

(a) determining in said patient a change in expression of one or more genes corresponding to a polynucleotide comprising a nucleotide sequence of SEQ ID NO: 1 – 3049; and

(b) determining a change in expression of said gene compared to expression of said one or more determined genes prior to commencement of said cancer treatment;

wherein said change in expression indicates progress of said treatment thereby determining the progress of said treatment.

60. The method of claim 59 wherein said change in expression is a decrease in expression and said decrease indicates success of said treatment.